THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte NICOLAAS J.L. VAN DER VALK

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Appeal No. 96-4092
Application 08/278,363[1]

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ON BRIEF

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Before JERRY SMITH, FLEMING and FRAHM, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

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[1] Application for patent filed July 21, 1994.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 7, all of the claims pending in the application.

The invention relates to a signal correction circuit for correcting deviating pixel values. On page 3 of the specification, Appellant discloses that if a pixel value for a given color differs substantially from the pixel value of a neighboring pixel, and if this difference is not present in the other color channels, the pixel will be considered to be deviating and its value will be replaced by a value derived from the pixel values of neighboring pixels.

Independent claim 1 is reproduced as follows:

1. A signal correction circuit for correcting deviating pixel values, comprising:

means for receiving pixel color values for more than one color;

filtering means for obtaining a plurality of second pixel color values from respectively corresponding pixel color

values of pixels surrounding a given pixel having first pixel color values; and

means for supplying one of the second pixel color values if a respectively corresponding one of the first pixel color values is larger than said one of the second pixel color values, and for determining whether the first pixel color values exceed the respectively corresponding second pixel color values for not more than one color;

wherein for correcting color signals of of [sic] more than one color, the means for supplying comprises further means for supplying said one of the second pixel color values only if the respectively corresponding first pixel color values exceed the second pixel color values for not more than one color.

The Examiner relies on the following references:

Meise et al. (Meise)	4,481,539	Nov. 6, 1984
Schulz et al. (Schulz)	4,485,399	Nov. 27, 1984
Lougheed	4,541,116	Sept. 10, 1985
Sudo et al. (Sudo)	5,144,446	Sept. 1, 1992

Claims 1, 2, 4, 6 and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lougheed in view of Sudo and Meise. Claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lougheed and Sudo in view of Meise

and Schulz. Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Sudo in view of Meise.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the brief and answer for the respective details thereof.

OPINION

We will not sustain the rejection of claims 1 through 7 under 35 U.S.C. § 103.

The Examiner has failed to set forth a ***prima facie*** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable

'heart' of the invention." ***Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.***, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), ***cert. denied***, 117 S.Ct. 80 (1996) ***citing W. L. Gore & Assoc., Inc. v. Garlock, Inc.***, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), ***cert. denied,*** 469 U.S. 851 (1984).

In regard to the rejection of claims 1, 2, 4, 6 and 7 under 35 U.S.C. § 103 as being unpatentable over Lougheed in view of Sudo and Meise, Appellant argues on pages 4 through 7 of the brief that Lougheed, Sudo and Meise, together or individually, fail to teach or suggest detecting errors in each of the colors, supplying correction signals on the basis of a combination of these defects, and correcting the deviant value on the basis of

the correction signal for each color. In particular, Appellant points out that the only reference to the combination of signals from two different imagers is taught in Meise. However, Appellant submits that Meise does not examine the outputs from the imagers, nor does Meise examine the pixel

values from the imagers to detect whether there are any errors. Appellant further points out that Meise does not contemplate different imagers having defective pixels in the same position and correcting for the same. Finally, Appellant submits that Meise is only dealing with known defects in known positions and does not consider the actual signals from pixels in the imagers.

On page 3 of the answer, the Examiner refers us to the final rejection for the grounds of the Examiner's rejection. On page 7 of the Examiner's final rejection, the Examiner states that Lougheed and Sudo do not disclose supplying the second value if the first pixel value for not more than one color is larger than the second value. The Examiner further states that Meise discloses a pixel correction circuit wherein a determination as to whether or not to make a pixel correction is based upon a combination of detected pixel deviations from each sensor, with a correction not being made at a given pixel location unless one of

the sensors is experiencing a defective pixel at that position. On page 8 of the final rejection, the Examiner argues that Meise expressly suggests Appellant's claimed invention of correcting a pixel color and dependence on at least one further pixel color value of said given pixel. The Examiner directs us to column 3, lines 13-25.

The issue before us is whether Meise teaches or suggests Appellant's claimed limitation of correcting a pixel color based upon a comparison with other colors in a three-color system. Turning to Meise, we note that Meise teaches that two or more CCD imagers which have random defects are optically coupled to form a single image. See abstract. Meise teaches in column 1, lines 13-15, that CCD imagers suffer from low yields due to imperfections and defects in the integrated circuit chips from which they are fabricated. Meise teaches that two or more of these defective CCD imagers may be optically coupled to form a single image. See abstract. Meise teaches that the defective portions of the CCD imagers are detected at the factory. When a location is addressed at which one imager has a defective photosensor, the

respective memory decouples it from the good photosensor of the other image. See abstract. In column 1, line 53, through column 2, line 46, Meise discloses that Figure 1

shows a block diagram of an imaging apparatus that carries out the above functions. In column 3, lines 9 through 25, Meise does teach for color operations an arrangement such as that shown may be used to respond to one or more of the primary colors.

However, we fail to find that Meise teaches or even suggests modifying Lougheed and Sudo's image defect correcting circuit which detects and corrects pixel values based upon pixel values of neighboring pixels. Furthermore, we fail to find that Meise teaches or suggests detecting errors in each of the colors of the pixel, supplying correction signals on the basis of a combination of these defects, and correcting the deviating pixel value based upon the correction signal for each color.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by

the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." ***Para-Ordnance Mfg.***, 73 F.3d at 1087, 37 USPQ2d at 1239, ***citing W. L. Gore***, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-313.

Furthermore, we note that Lougheed and Sudo are concerned with a completely different problem than Meise. Lougheed and Sudo are concerned with filtering an image matrix. Meise, on the other hand, is concerned about being able to use two or more defective CCD images such that the combined CCD defective imagers produce a defective free output. We fail to find that Meise would suggest to those skilled in the art to modify the Lougheed neighborhood image processing stage in order to correct deviated pixel values of different colors based upon the interrelationship between pixel values of all the colors.

In regard to the rejection of claim 3 and the rejection of claim 5, we note that the Examiner relies on Meise as above. For the same reasons above, we fail to find that Meise teaches or suggests Appellant's claimed limitation of correcting pixel color values of more than one color based upon dependence of at least one further pixel color value of a given pixel. Therefore, we will not sustain these rejections for the same reasons above.

We have not sustained the rejection of claims 1 through 7 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

JERRY SMITH)
Administrative Patent Judge)
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MICHAEL R. FLEMING	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
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ERIC FRAHM	)	
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